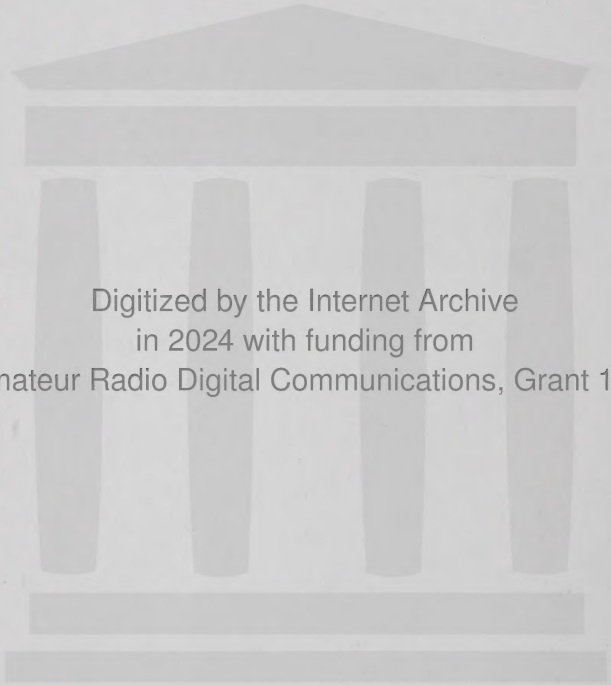
USER'S MANUAL

Digital Satellite Receiver

X²



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DiSEqC is a trademark of EUTELSAT

Introduction

1.1 Overview

This satellite receiver is designed for using digital free-to-air channel reception. Enjoy the rich choice of more than 4,000 different channels, broadcasting a large range of culture, sports, cinema, news, events, etc. This receiver is a technical masterpiece, assembled with the highest qualified electronic parts.

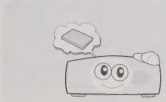
1.2 Main Features

- ▶ MPEG-II Digital & fully DVB compliant.
- ▶ On-screen display with 256 color resolution.
- ▶ DiSEqC Control Version 1.0, 1.1, 1.2 and USALS compatible.
- ▶ Renameable 8 Favorite channel groups.
- ▶ Powerful Channel control by Favorites, Lock, Skip, Move and Delete.
- ▶ Channel Sorting by Alphabet, Transponder and CAS.
- ▶ 10 languages(OSD & Menu) : English, Italian, Turkish, Arabic, Parsi, German, French, Russian, Spanish, Protuguese.
- ▶ Extended EPG and Program Reservation through EPG.
- ▶ Teletext support. (OSD and VBI Insertion)
- ▶ Last channel memory function.
- ▶ Total 4,000 Channels programmable.
- ▶ Multi-Satellite Search.
- ▶ Games Included. (Tetris, Sokoban, Snake)
- ▶ Software & Channel Database Upgrade via RS-232C from PC (PC-to-Set) or Set (Set-to-Set).
- ▶ Parental lock / Installation Lock / Receiver Lock / Channel Lock / Lock Channel confirm.
- ▶ Zoom Function in Pause.

Safety/Precaution

2.1 Safety

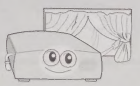
Be sure to read the user's manual before starting the operation of the unit.



Do not touch the power cord with wet hands as it may cause electric shock.

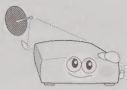
Never open the cover. It is very dangerous to touch the inside of the unit due to possible electric shock.

Place the unit in a well ventilated and no-heat environment.



When you do not use this unit for a long time, make sure that power cord is pulled out from the outlet. Also do not use a damaged power cord as it may cause fire or electric shock.

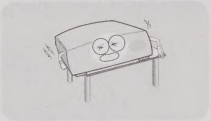
A professional installation is required. If reception is interrupted, contact your local service centre.



2.2 Precautions

When installing the unit

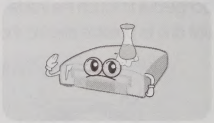
Install the unit horizontally. An uneven installation may cause the unit to be damaged.



Do not put heavy items such as a TV on the unit. That may cause the unit to be damaged.

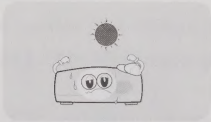
Do not leave the unit where the water drops or splashs.

Do not put water holding items shch as vase on the unit.

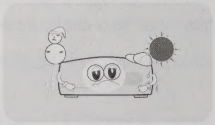


Do not install the unit:

- **Where it is subject to vibrations**
- **Where it is exposed to direct sunlight**
- **Where there is humidity**
- **Where the temperature is too high or too low.**
- **Where there is no ventilation**



Moving the unit to a hot area from a cold one will cause condensation. Do not operate the unit for one or two hours or until it has dried completely.



Check Points before Use

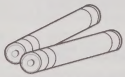
3.1 Accessories

Accessories of this are as below

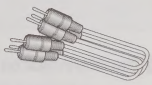
User's manual : 1

Remote control : 1

Batteries (AAA type) : 2



RCA Cable : 1



▶ If any accessories listed above are missing, contact the sales representative where you purchased this unit.

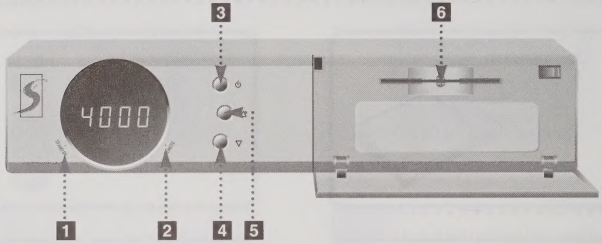
3.2 The Satellite dish

Your dish should be properly installed and azimuth and elevation must be precisely set up.

▶ This unit is working with DiSEqC 1.2 on a compatible antenna positioner. Ask your dealer for information.

Controls/Functions

4.1 Front Panel



1 Standby/Power on Indication Light : Flashing red on "Stand By" mode and no right on "Power On" mode.

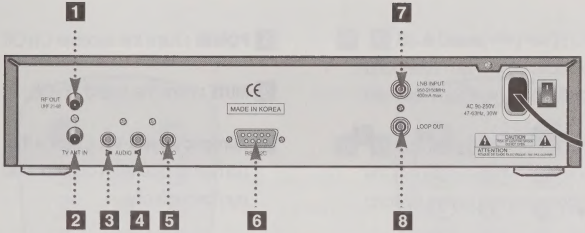
2 Indication Light : While pressing RCU key, this light will be flashing at the same time.

3 Power : To switch the receiver in "standby" mode or in power on mode.

4 - 5 CH. (▲/▼) : To change channel or cursor position on the application screen.

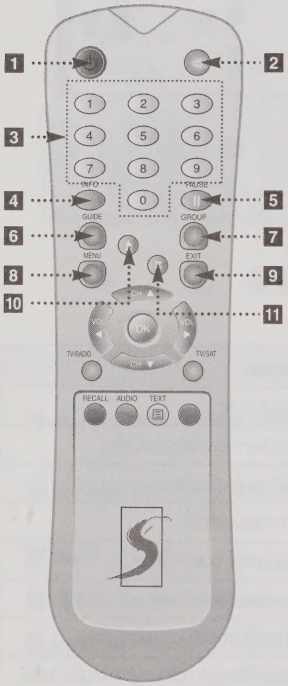
6 Smart Card Reader : To insert smart card for encrypted channel access.

4.2 Rear Panel



No.	Name	Connector	Function
1	RF OUT UHF 21-69	IEC 169-2 male	Output to TV.
2	TV ANT IN	IEC 169-2 female	Input from terrestrial antenna.
3	AUDIO R	RCA cinch	Right audio output.
4	AUDIO L	RCA cinch	Left audio output.
5	VIDEO	RCA cinch	Composite video output.
6	RS-232C	DB-9	Low speed serial port.
7	LNB INPUT	IEC 169-24 female	IF input from LNB to digital tuner.
8	LOOP OUT	IEC 169-24 female	IF loop-through output from digital tuner.

4.3 Remote Control



1 POWER : Turns the receiver On/Off.

2 MUTE : Turns the sound On/Off.

3 Numeric Keys(0-9) : Controls the numerical operation and channel numbers directly.

4 INFO. : Shows the information of the current program. If you press once more, detail information box will be shown.

5 PAUSE : This key is used to pause the video. Press once more to resume the video.

6 GUIDE(EPG:Electronic Program Guide) : Show the TV/Radio program guide.

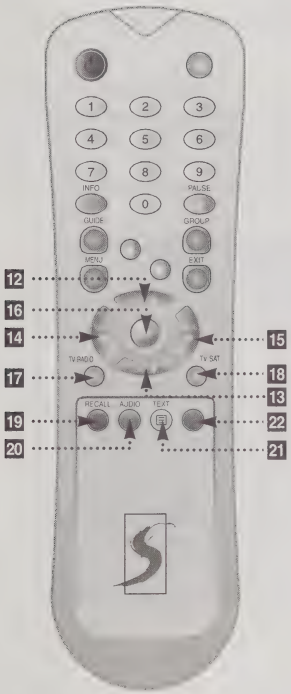
7 GROUP : To change the channel groups(Satellites or favorite groups).

8 MENU : Enter or exit the main menu.

9 EXIT : Exit from the present menu and moves to the previous menu.

10 - 11 Double arrow UP/DOWN(/) : Move to the next or previous page if more than one page are available.

4.3 Remote Control



12 - **13** **Up & Down(/) :** Changes channels in non-menu mode and moves the cursor up/down in menu mode.

14 - **15** **Left & Right(/) :** Changes the volume level in non-menu mode and change setting in menu mode.

16 **(OK) :** Shows the Channel List in non-menu mode and select an item or confirm in menu mode.

17 **TV/RADIO :** Switches between TV and Radio.

18 **TV/SAT :** Toggles the TV output source between the satellite input and UHF/VHF antenna input.

19 **RECALL(RED) :** Moves to previous channel. Used for special function in menu.

20 **AUDIO(GREEN) :** Shows the multi-language audio track, stereo-mono mode, subtitle information. Used for special function in menu.

21 **TEXT(YELLOW) :** Shows the teletext contents if teletext is transmitted. Used for special function in menu.

22 **BLUE :** Used for special function in menu.

How to Connect

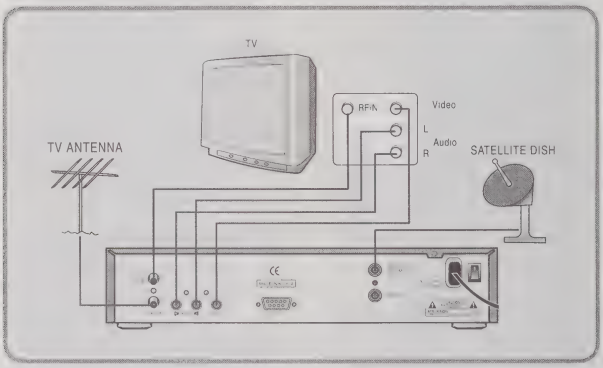
5.1 When Connecting IRD to TV with RF, AV connectors

1 Connect the TV antenna to TV ANT IN

2 Connect the RF-IN of TV to RF-OUT

3 Connect the Video and Audio of TV to the Video and Audio. Connect Red and White connector to Audio R and Audio L, and Yellow into Video port respectively

4 Connect your satellite dish



Operation

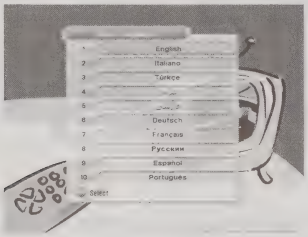
6.1 Getting Started

After your receiver is powered on, proceed with installation as follows:

1) Menu Language Setting

❶ Turn on your TV and receiver.

❷ The pop-up menu for language selection will appear <Figure 6-1>.
Select one language and press the ◯ to proceed.



<Figure 6-1>

✱ Note : Languages displayed in 'Language' raw are supported by your receiver.

2) Antenna Setup

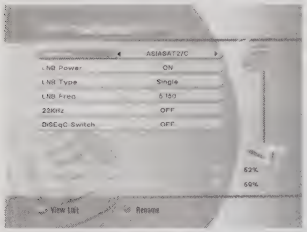
❶ Press the **MENU** button to display the main menu.

❷ Use the ▲/▼ and ◀/▶ to move in menu.

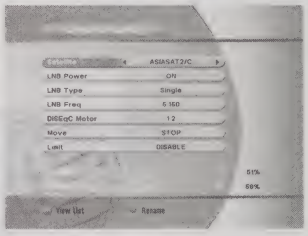
❸ Press the ● on the "Dish Setting". The following window will appear. <Figure 6-2>

If you have motorized dish, press the ● on the "Motorized Setting". <Figure 6-3>

**** Note : Enter 4-Digit password if need arise.***
The default password is '0000'.



<Figure 6-2>



<Figure 6-3>

❹ Select item you want to edit and change each parameter.<Dish Setting>

- LNB Power : Select LNB power(ON / OFF / 13V / 18V)
- LNB Type : Select your LNB Type.(Single / Universal / OCS)
- LNB Freq : Select LNB oscillator frequency.
- 22KHz : Set the path of 0/22KHz switch box.
- DiSEqC switch : Select DiSEqC box type(OFF / 1.0 / 1.1)
- Committed / Uncommitted : Select DiSEqC port.

❺ Select item you want to edit and change each parameter.<Motorized Setting>

- DiSEqC Motor : Select DiSEqC Motor type (OFF / 1.2 / USALS)
- Move : You can change the dish position to West / East.
- Limit : If you want to set limit, press ●.
  - Disable Limit : You can disable East and West Limit.
  - Goto Center : Move the dish to the 0 position.
  - Set East / West Limit : You can move the dish East or West using ◀/▶.
    Press the ● to fix East or West limit.

- Sat Degree : Satellite location.
- Antenna Position : Press .
  - Goto Reference : Move the dish to the 0 position.
  - Antenna Longitude : Your longitude at present.
  - Antenna Latitude : Your latitude at present.

✱ ***Note : When you change each parameter,you need to know exact parameter of LNB to modify L.O.(local oscillator) frequency.***

✱ ***Note : When you change each parameter,you need to understand environment of connecting the receiver and antenna in order for you to set 22KHz and DiSEqC properly.***

❻ After setting, press the **EXIT** button to store the changed data.

3) Satellite Scan

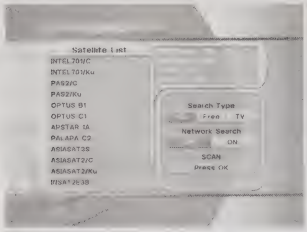
Through this function, the receiver searches for all the available channels and saves them in the memory.

▶ **Auto Scan <Figure 6-4>**

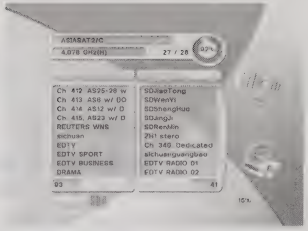
❶ Press the on which you want to scan in satellite list. You can select more than one satellite.

❷ Press the and select "Search type" or "network Search" option.
- Search Type : Determine searching channels(All channel / Free channel only / TV channel only)
- Network Search : If you set to ON, you can find more transponders through NIT Scan.

❸ If you press the on the "SCAN", the selected satellites will be scanned.
<Figure 6-5>



<Figure 6-4>



<Figure 6-5>

▶ **Manual Scan <Figure 6-6>**

❶ Select transponder which you want to scan.

❷ If you want to change an information of current transponder(Frequency, Symbol Rate and Polarization), just input information using **NUMERIC** button.

❸ If you want to add new transponder, press **GREEN** button.

❹ If you want to delete current transponder, move cursor to the Frequency and press **YELLOW** button.

▶ **PID Scan <Figure 6-7>**

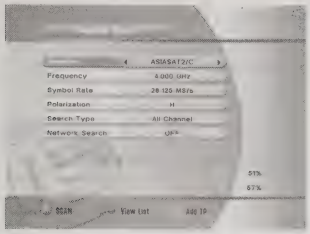
❶ Select transponder which you want to scan.

❷ If you want to change an information of current transponder(Frequency, Symbol Rate and Polarization), just input information using **NUMERIC** button.

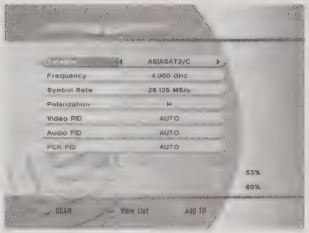
❸ If you want to add new transponder, press **GREEN** button.

❹ If you want to delete current transponder, move cursor to the Frequency and press **YELLOW** button.

❺ You can also search a channel of the specified transponder by specifying PID data(Video, Audio and PCR).



<Figure 6-6>



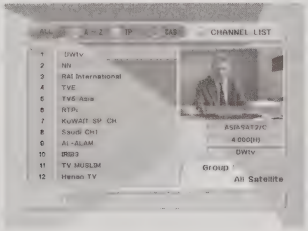
<Figure 6-7>

** Note : Now you have complete all steps needed for watching programs.*
If you could not see the program after finishing these procedures, please contact a shop where you bought your receiver or installer who installed your receiver.

4) Select Channel

You can change the current channel to any other channel you want.

- ▶ In case you want to select a channel at random without knowing the channel name, you can navigate between channels untill you fild the channel you want.
- ▶ If you know the channel number, enter the number and wait 2 seconds till the channel changed.
- ▶ If you know the channel name, press and the channel list will appear. <figure 6-8>



<Figure 6-8>

❶ In the right side of screen, detailed information of the selected channel will be displayed.
(Satellite Name, Frequency(polar) and Channel Name)

❷ You can navigate between channels with this buttons.
- / : Moves up / down.
- or / or : Moves page up / page down.
- **RED :** Shows all channels in current group.
- **GREEN :** Shows channels sorted by alphabet.
- **YELLOW :** Shows channels sorted by Transponder.
- **BLUE :** Shows channels sorted by CAS system.

❸ When the scroll bar is positioned on the channel you want to see, press .

5) Other Function on Remote Control

▶ **Volume Control**

❶ While you are watching a program, press or to control volume.

❷ When necessary, press **MUTE** button to remove the sound of the program.
Then, your receiver goes into mute condition and the mute icon will be displayed.
Press **MUTE** button again to turn the sound on.

▶ **Channel Information**

❶ Whenever press the **INFO** button, the information banner will appear for a few seconds.

❷ If you press the **INFO** again on the information mode, the detail banner will appear.

▶ **TV / SAT switching**

If you press TV/SAT, the signal reception path will be changed to RF modulator.
- TV Mode : TV ANT In signal will be out. (front will display "TV")
- SAT Mode : Decoded signal will be out through RF.(front will display channel number)

6.1 Getting Started

▶ TV / RADIO switching

You can use this menu when you change a TV channel to a Radio channel or vice versa.

▶ RECALL(RED)

Return to the previous channel.

▶ Subtitle / Audio

You can adjust the subtitle and audio status of the current channel.

Press **AUDIO(GREEN)** button, then subtitle and audio related menu will be displayed.

- Audio Mode : Stereo -> Mono-Left -> Mono-Right
- Audio Track : All tracks available in this program.
- Subtitle : All subtitle language available in this program.

**** Note : These subtitle and audio parameters are workable only when the receiving channel supports these functions.***

▶ Teletext(YELLOW)

Teletext Service is text data service from Service Provider.

It is available only when the satellite signal carries teletext service data.

▶ PAUSE

This key is used to pause the video. Press once more to resume the video. In pause mode you can zoom in partial of video.

❶ In pause mode, select position using / / / .

❷ Press to zoom in. Press again to zoom out.

▶ GROUP

When watching TV or listening to Radio, you can get the satellite or favorite channel group list by pressing the **GROUP** button on the remote control unit.

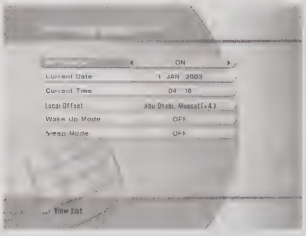
Group menu will display only registered satellite and favorite group.

6.2 System Setting

1) Time Setting

This sub menu allows you to set your local time, wake up time, wake up channel and sleep time. <Figure 6-9>

- GMT Usage : If you set ON, local time is determined by adjusting the differences from GMT(Greenwich Meantime), according to your location.
- Current Date : If GMT Usage ON, this date is determined by GMT.
  If GMT Usage OFF, you can modify this by pressing .
  If you set OFF, receiver doesn't refer to GMT. Local time is determined by adjusting current date and current time.
- Current Time : If GMT Usage ON, this time is determined by GMT.
  If GMT Usage OFF, you can modify this by pressing **NUMERIC** button.
- Local Offset : If GMT Usage ON, Local time is GMT time + Local Offset.
- Wake Up Mode : You can set the cycle of the wake up mode.(Off / Once / Daily)
- Wake Up Time : You can set wake up time by pressing **NUMERIC** button.
- Wake Up Channel : You can set wake up channel by pressing .
- Sleep Mode : You can set the cycle of the sleep mode(Off / Once / Daily)
- Sleep Time : You can set sleep time by pressing **NUMERIC** button.

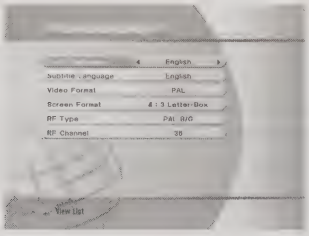


<Figure 6-9>

2) A/V Output Setting

This sub menu allows you to set audio/video output setting. <Figure 6-10>

- Audio Language : Default language of audio when changing channel.
- Subtitle Language : Default language of subtitle.
- Video Format : Video output format(AUTO / PAL / NTSC).
- Screen Format : TV aspect ratio(16:9 / 4:3 Letter-Box / 4:3 Pan Scan)
- RF Type : If you set PAL in Video Format, this receiver supports PAL B/G, PAL I, PAL D/K among PAL Standards.
- RF Channel : Sets the channel to display the audio and video signal on your TV.(21 ~ 69) If you select 40, receiver will be displayed at channel 40 on your TV.

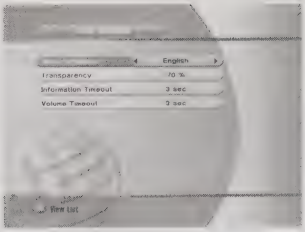


<Figure 6-10>

3) OSD Setting

This sub menu allows you to set menu language, OSD transparency, Information and volume timeout. <Figure 6-11>

- Menu Language : Select the desired language of the menu.
- Transparency : Select OSD transparency of the menu.(1% ~ 100%)
- Information Timeout : Select the display duration of the information banner. (1 sec / 2 sec / 3 sec / 5 sec / 10 sec)
- Volume Timeout : Select the display duration of the volume box. (1 sec / 2 sec / 3 sec / 5 sec / 10 sec)



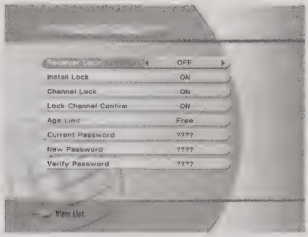
<Figure 6-11>

4) Security Setting

This sub menu allows you to change the password option to unlock or lock some menu entry and to change password. <Figure 6-12>

- Receiver Lock : If you set ON, receiver asks you to enter PIN code when power on.
- Install Lock : If you set ON, receiver asks you to enter PIN code when entering Installation menu.
- Channel Lock : If you set ON, receiver asks you to enter PIN code on channels menu.
- Lock Channel Confirm : If you set ON, receiver asks you to enter PIN code when changing to locked channel.
- Age Limit : Prevents children or unauthorized people from watching programs. (Free / 8 above / 12 above / 15 above / 18 above)
- Current Password : Input current password for change your password.
- New Password : Input new password you want to change.
- Verify Password : Input new password one more for confirmation.

**** Note : The default password is '0000'.***

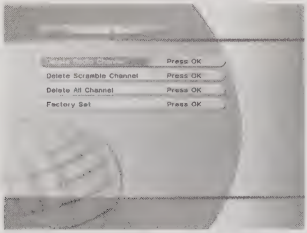


<Figure 6-12>

5) Database Reset

This sub menu allows you to restore the factory set values in case the user has encountered some problems after changing any new values of channel data and others which may be in error. <Figure 6-13>

- Delete Radio Channel : Erase all radio channels in database.
- Delete Scramble Channel : Erase all scramble channels in database.
- Delete All Channel : Erase all channels in database.
- Factory Set : Erase all channels and restore default setting.
  The receiver will return to factory default parameters.



<Figure 6-13>

6.3 Channels

1) Set Favorites

This sub menu allows you to set up favorite name and favorite lists as you want.

You can choose TV or Radio channels in an alternative way by pressing **TV/RADIO** button.

This receiver support 8 favorite list.

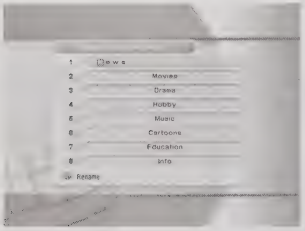
❶ Press the ● on the "Set Favorites". The following menu will be displayed. <Figure 6-14>

❷ Press ◀ / ▶ and ●. The following menu will be displayed. <figure 6-15>
If you want to change favorite group name, press the **RED** button.

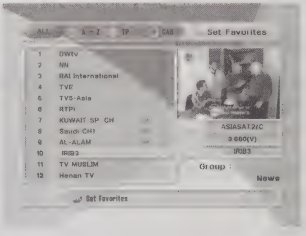
❸ Press ● to select the channel that you want to add into favorite channel list.

❹ Press ● one more to remove the channel that added favorite channel list.

❺ Press **EXIT** button to return to previous menu.



<Figure 6-14>



<Figure 6-15>

2) Edit Channels

This sub menu allows you to rename the channels and input user PID.

You can choose TV or Radio channels in an alternative way by pressing **TV/RADIO** button.

You can change channel list group by pressing **GROUP** button.

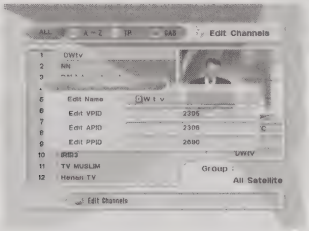
❶ Press the ● on the "Edit Channels". The following menu will be displayed.
<Figure 6-16>

❷ Press ● to select the channel that you want to edit.

❸ Press ● in Edit Name to rename the channel, the keypad will be displayed.

❹ You can edit PID by pressing **NUMERIC** key.

** Note : The VIDEO PID, AUDIO PID and PCR PID are very important for optimal satellite signal reception. We recommend you get professional advice where available.*



<Figure 6-16>

3) Move Channels

This sub menu allows you to move the channels.

You can choose TV or Radio channels in an alternative way by pressing **TV/RADIO** button.

You can change channel list group by pressing **GROUP** button.

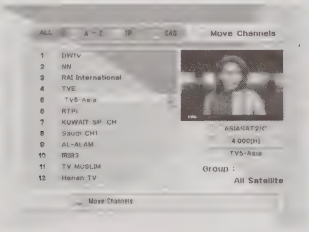
❶ Press the ◯ on the 'Move Channels'. The following menu will be displayed.
<Figure 6-17>

❷ Press ◯ to select the channel that you want to move. Moving icon will be displayed.

❸ Press ⌒ / ⌣ / ‹ / › / **NUMERIC** button to move the selected channel.

❹ Press ◯ one more to place the channel.

❺ Press **EXIT** button to return to previous menu.



<Figure 6-17>

4) Lock Channels

This sub menu allows you to lock the channels for prevent watching this channel.

Once the channel is locked, every time you try to watch the channel, you will be asked to enter password.

You can choose TV or Radio channels in an alternative way by pressing **TV/RADIO** button.

You can change channel list group by pressing **GROUP** button.

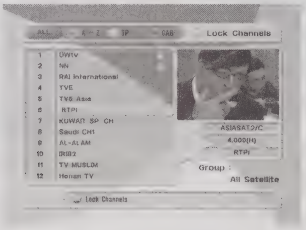
* ***Note : If you set "Lock Channel Confirm(refer <6.2>security setting)" to OFF, you will not be asked to enter password even if the channel is locked.***

❶ Press the ○ on the 'Lock Channels". The following menu will be displayed. <Figure 6-18>

❷ Press ○ to select the channel that you want to lock. Lock icon will be displayed.

❸ Press ○ one more to cancel lock. Lock icon will be disappeared.

❹ Press **EXIT** button to return to previous menu.



<Figure 6-18>

5) Skip Channels

This sub menu allows you to skip the channels.

Once the channel is skipped, every time you try to change channel using ▲ / ▼ in non-menu mode, this channel will be skipped.

You can choose TV or Radio channels in an alternative way by pressing **TV/RADIO** button.

You can change channel list group by pressing **GROUP** button.

* ***Note : If you try to change channel using NUMERIC button in non-menu mode, you can watch this channel.***

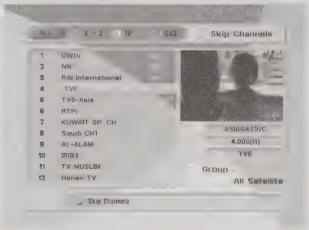
6.3 Channels

❶ Press the ◎ on the "Skip Channels". The following menu will be displayed. <Figure 6-19>

❷ Press ◎ to select the channel that you want to skip. Skip icon will be displayed.

❸ Press ◎ one more to cancel skip. Skip icon will be disappeared.

❹ Press **EXIT** button to return to previous menu.



<Figure 6-19>

6) Delete Channels

This sub menu allows you to delete the channels.

You can choose TV or Radio channels in an alternative way by pressing **TV/RADIO** button.

You can change channel list group by pressing **GROUP** button.

* ***Note : Be careful!! If you delete channel, you can't watch this channel until re-scan.***

❶ Press the ◎ on the "Delete Channels". The following menu will be displayed. <Figure 6-20>

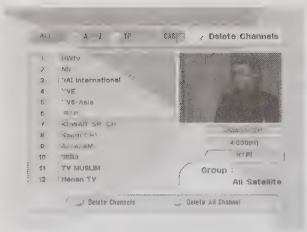
❷ Press ◎ to select the channel that you want to delete. Delete icon will be displayed.

❸ Press ◎ one more to cancel delete. Delete icon will be disappeared.

❹ Press **INFO** button to delete all channels in current list. You will be asked to enter password.

❺ Press **EXIT** button to return to previous menu.

6.3 Channels



<Figure 6-20>

6.4 Guide

1) GUIDE(EPG:Electronic Program Guide)

This sub menu allows you to get the electronic program guide if available.

❶ If you press **GUIDE** button, guide menu will be displayed. <Figure 6-21 >

❷ Press the ◀ / ▶ to see previous/next guide.

❸ Press the ▲ / ▼ / ◀ / ▶ to move to other channel.

❹ Press ● to watch and get the EPG data.

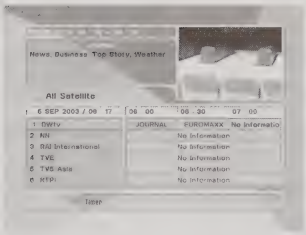
If you press ● in current viewing channel

- If current EPG is selected, return to previous menu and change to selected channel.
- If next EPG is selected, selecting event will be reserved and event color will be changed.

❺ By pressing **TV/RADIO** button, you can choose TV or Radio list.

❻ By pressing **GROUP** button, you can choose channel list group.

❼ If you press **RED** button, timer menu will be displayed. <Figure 6-22>



<Figure 6-21>

2) Timer

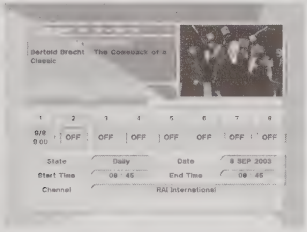
This sub menu allows you to set the on/off time of your receiver.

❶ If you press **RED** button in guide menu, timer menu will be displayed. <Figure 6-22>

❷ Press the ▲ / ▼ to move to other items.

❸ Press the ◀ / ▶ to change the parameter.

- Timer No. : Selete the timer that you want to modify.(1 ~ 8)
- State : Select the timer cycle of action.(off / once / daily / weekly)
- Date : Select the date using ●. Calendar pop-up will be displayed.
- Start Time : Input the time using **NUMERIC** button for your receiver power-on.
- End Time : Input the time using **NUMERIC** button for your receiver power-off.
- Channel : Select the channel using ●. Channel list pop-up will be displayed.


Bertold Brecht The Comeback of a Classic
1 2 3 4 5 6 7 8
OFF
State Daily
Date 8 SEP 2003
Start Time 08 45
End Time 09 45
Channel RAI International

<Figure 6-22>

6.5 Games

1) Tetris

❶ Press the ◯ on the "Tetris". The following menu will be displayed. <Figure 6-23>

❷ You can select skill using ◠ / ◡ .

❸ Press the ◯ to start game <Figure 6-24>, or press the **EXIT** button to return previous menu.

❹ Press the ◯ to rotate the block.

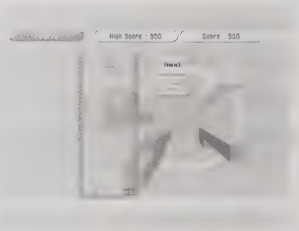
❺ Press ◁ / ▷ to move the block.

❻ Press **DOWN** button to drop the block.

❼ In the right top small window, you can see next block.

❽ Press **EXIT** button to quit the game.

<Figure 6-23>



<Figure 6-24>

2) Sokoban

To play the sokoban, you have to push the balls to their correct positions. The balls can only be pushed, never pulled, so you have to be careful not to push them into a corner where you can't get them out again.

You can only push one ball at a time.

❶ Press the ◯ on the "Sokoban". The following menu will be displayed. <Figure 6-25>

❷ You can select skill using ◠ / ◡ .

❸ Press the ◯ to start game <Figure 6-25>, or press the **EXIT** button to return previous menu.

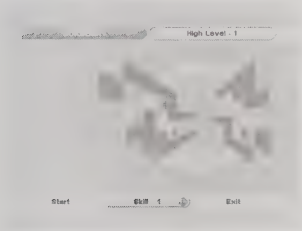
❹ Press the ▲ / ▼ / ◀ / ▶ to move.

❺ Press **RED** button to undo previous move. You can undo only one step.

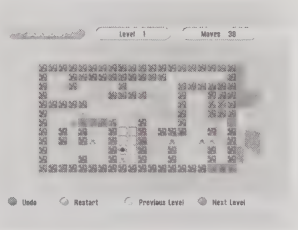
❻ Press **GREEN** button to restart.

❼ Press **YELLOW/BLUE** button to jump previous/next level. You can jump between completed level.

❽ Press **EXIT** button to quit the game.



<Figure 6-25>



<Figure 6-26>

3) Snake

❶ Press the ● on the "Snake". The following menu will be displayed. <Figure 6-27>

❷ You can select skill using ▲ / ▼.

❸ Press the ● to start game <Figure 6-28>, or press the **EXIT** button to return previous menu.

❹ Press the ▲ / ▼ / ◀ / ▶ to move.

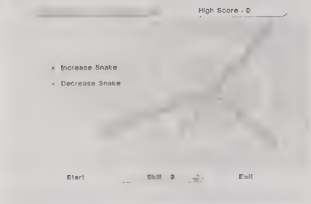
❺ If the snake is passed through the BLUE icon, the length will be increased.

❻ If the snake is passed through the RED icon, the length will be decreased.

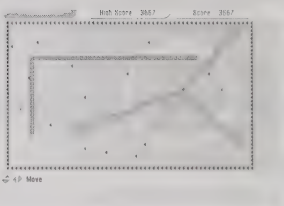
❼ If the snake is passed through the GRAY icon(block), the game end.

❽ Press **EXIT** button to quit the game.

6.5 Games



<Figure 6-27>

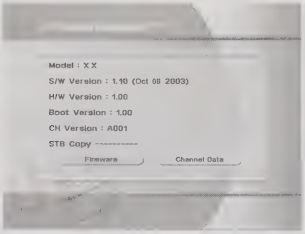


<Figure 6-28>

6.6 System Information

You can check the current information about your receiver such as receiver model name, S/W version, H/W version, manufacturing date, etc. <Figure 6.29>

* ***Note : This information is necessary when you download new software or you need to repair the receiver.***



<Figure 6-29>

Trouble Shooting

There may be various reasons for the abnormal operation of the unit.Therefore,if the unit does not work properly,check it according to the procedures shown in the table below :

Problem	Possible causes	Remedy
LED on front panel does not light.	AC power cord disconnected.	Connect power cord properly into the power socket.
No Picture or sound.	Wrong connection of the video/audio output to TV input terminal.	Connect two terminals correctly with RCA or RF cable.
	Wrong connection of satellite antenna cable.	Connect the antenna cable correctly.
	Wrong direction of satellite antenna.	Adjust the direction of antenna.
	No signal or weak signal.	Check the cable connections, LNB and other equipment connected between the LNB and the receiver or adjust the antenna.
	Wrong setting of channel information in MENU screen.	Type the setting value correctly.
Black-and-white screen or V-Hold.	Your TV mode is different from satellite broadcasting mode.	Use TV of same mode.
		Use the NTSC/PAL converter connected to the receiver and TV.
The remote controller is not working.	Battery exhausted.	Change the batteries.
	Fluorescent light interfering with the remote controller.	Switch off the light.
	Remote controller is incorrectly aimed.	Aim the remote control at the receiver.

Specifications

System capabilities	Fully DVB compliant	
LNB/Tuner input	Connector	IEC 169-24,female
	Frequency range	950MHz ~ 2150MHz
	Signal level	-65dBm ~ -25dBm
	LNB supply	14/18V, max 500mA
	LNB switch control	22KHz
	DiSEqC	Ver 1.0/1.1/1.2/USALS Compatible
Demodulator	Front end	QPSK
	Symbol rate	2Msps ~ 45Msps
	SCPC and MCPC Capable	
	Spectral inversion	Auto conversion
System resource	Processor	32bit processor (80MHz)
	SDRAM	8Mbyte
	FLASH	2Mbyte
	EEPROM	32Kbyte
Video decoder	MPEG 2	Main Profile @Main Level
	Data Rate	up to 15M bits/s
	Resolution	720 X 576, 720 X 480
	Video format	NTSC, PAL
	Aspec Ratio	4:3,16:9
Teletext	DVB compliant	
MPEG Audio	MPEG 1 layer 1 &2	
	Type	Mono,Dual mono,Stereo,Joint Stereo
	Sampling rates	32,44.1 and 48 KHz
Serial data interface	Connector	9pin D-sub male, Max 115K bps
Remote control	Code	NEC-IR
	Operating condition	up to 7 Meter

Power supply	Power consumption	max 30W
	Supply voltage	90V ~ 250V
	Supply frequency	47Hz ~ 63Hz
Rear Panel connectors	Video out	1 X RCA cinch
	Audio L/R	2 X RCA cinch
	Serial data	9pin D-sub
	Digital tuner input	IEC 169 - 24
	Loop-through Digital tuner	IEC 169 - 24
	Terrestrial ant input	IEC 169 - 2
	RF modulator output	IEC 169 - 2

RF modulator PAL G/I/K TV Type	Connector	IEC 169-2, female/male
	Frequency	470 ~ 860MHz
	Output channel number	21 ~ 69
Physical Specification	Size (W X H X D)	260 X 54 X 232(mm)
	Weight (Net)	1.8 Kg

E109000198A